

August 21, 2007 CPC



ADDENDUM II

07PW0406

Chesterfield County Parks and Recreation
(Midlothian Middle School – Recreation Site Improvements)

Midlothian Magisterial District
South line of Midlothian Turnpike

REQUEST: Waiver of Development Standard

Chesterfield County Parks and Recreation requests Planning Commission approval of a Development Standards Waiver to the Zoning Ordinance requirement that illumination at the property line adjacent to Agricultural (A), Residential Townhouse (R-TH) and Residential Multifamily (R-MF) Districts be limited to five-tenths (0.5) foot candle per Section 19-508.3 of the Zoning Ordinance.

RECOMMENDATION

The applicant is requesting a sixty (60) day deferral.

August 21, 2007 CPC



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The reason for this addendum is that the attached letter was not included with the staff report. Also, an Overall Site Layout sheet is included to provide additional clarity to the location of the site in relation to the adjacent residential property.

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July 3, 2007

Chesterfield County Planning Department
P.O. Box 40
Chesterfield, VA 23832

Re: Midlothian Middle School – New Parking
Development Standards Waiver
3979-45

To Whom It May Concern:

On behalf of Chesterfield County Department of Parks and Recreation, we are requesting a Development Standards Waiver to Section 19-508.3 of the Chesterfield County Zoning Ordinance. The development planned for Midlothian Middle School includes constructing a new parking lot and lighting of an existing softball practice field. We would like to add new athletic field sports lighting to the existing practice field. As noted below, we meet the five factors for a Development Standards Waiver outlined in Section 19-19.

1. The existing depth of the available property creates a hardship that does not permit us to meet the 0.5 foot candle limit. We are unable to move the lights farther away from the property line to maintain a zero light level increase. We considered locating the light poles on the southern side of the field, but the resultant light levels within the field were uneven and thus did not meet the sports lighting requirements for a playable field. We considered moving the field, but due to the location of the existing track the field could not be moved further away from the property line.
2. The requirement does not create an undue hardship that is shared by the surrounding property. The property to the north, east, west is commercial property. The property to the south is residential property. These properties are not for public use, such as a school, and thus do not require sports lighting. The school provides public fields that typically are lighted to permit the field to be used in the evening.

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3. Authorizing the waiver to Section 19-508.3 will not substantially detriment the adjacent properties or character of the district because the proposed increase in the lighting levels is limited and does not change the existing lighting levels excessively. We measured the existing light levels along the property line, as shown on Sketch SK-2, and found the existing light levels to exceed the 0.5 foot candle limit by more than 8.9 foot candles at the brightest location. The proposed design will result in the light levels to remain high, but we will be increasing the levels by no more than 0.09 foot candles at the brightest point.
4. The request for the waiver does not constitute a condition general enough to warrant an amendment to Chapter 19 of the Chesterfield County Zoning Ordinance. The fields at most school sites are further away from residential property lines and the existing lighting at the property line is low. This site is unique since the available field is close to the property line.
5. Granting of this waiver will allow the property to comply with the comprehensive plan because the school site is a public use and is supported by the recreation facilities. Lighting the field will enhance the use, therefore better complying with the comprehensive plan.

Based on the above information, we feel that a waiver for this situation is justified.

If you have any questions regarding our request, please do not hesitate to call me at 285-4171.

Very truly yours,

HANKINS AND ANDERSON, INC.



William C. Wheeler, P.E.
Associate
LEED AP
Civil

cc: Stuart Connock, Jr.
Enclosed: Property Line Lighting Levels for 20 foot and Sports light poles, Lighting Level Calculations, Light Cut Sheets, Site Plan

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VICTORY MAP

SCALE 1"=200'



NOTE

THIS SHEET IS FOR INFORMATIONAL PURPOSES ONLY AND SHALL NOT BE USED FOR ANY OTHER PURPOSES. THE INFORMATION CONTAINED HEREIN IS THE PROPERTY OF THE CONSULTING ENGINEER AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF THE CONSULTING ENGINEER.

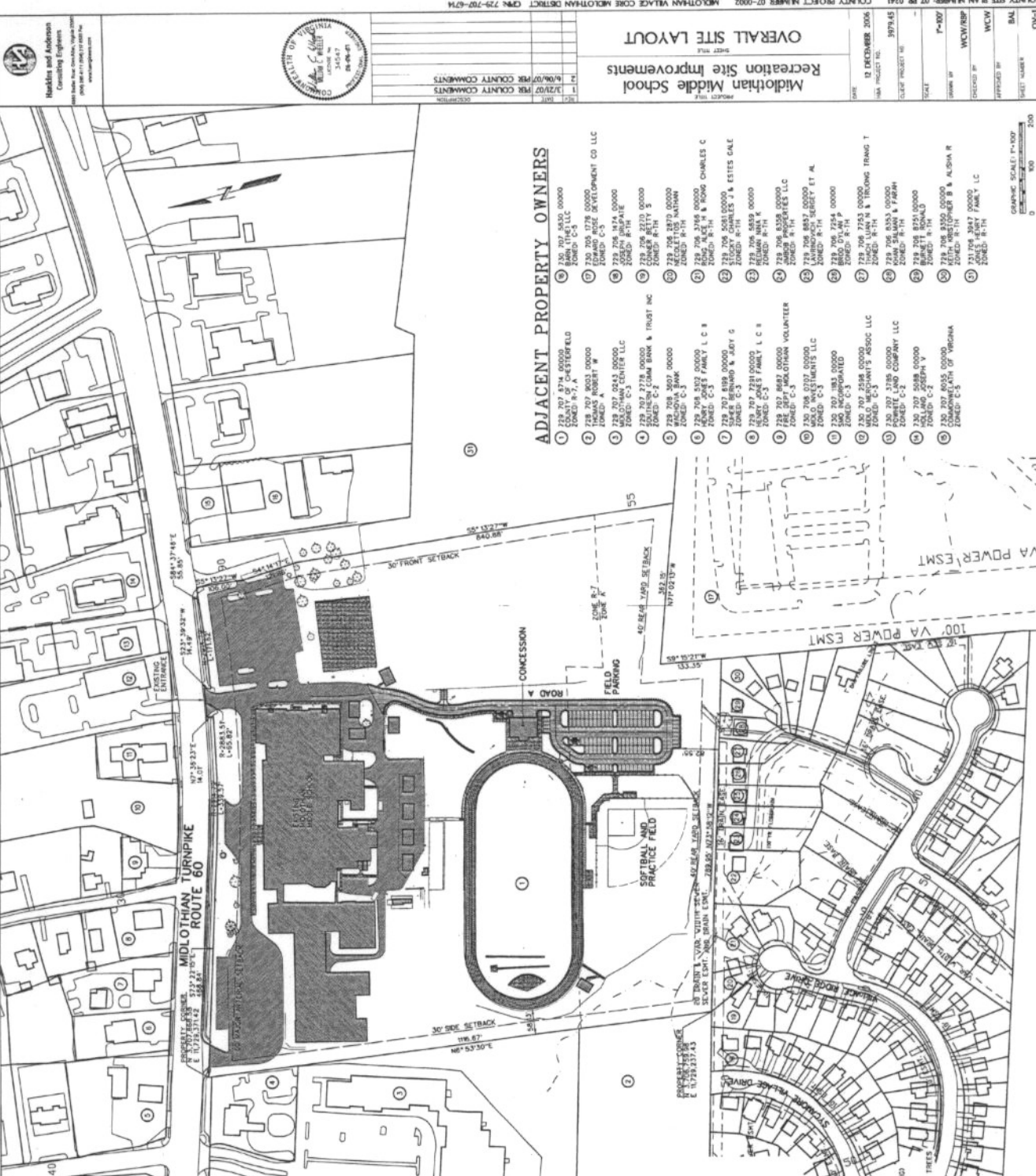
IMPERVIOUS AREA CALCULATIONS*

EXISTING IMPERVIOUS AREA	0.00 AC
EXISTING PAVING AREA	0.00 AC
PROPOSED PAVING AREA	0.00 AC
PROPOSED IMPERVIOUS AREA	0.00 AC
PERCENT IMPERVIOUS AREA	0.00%

* HATCHED AREA REPRESENTS IMPERVIOUS AREA

GENERAL NOTES

- OWNER/DEVELOPER: ...
- CONSULTING CIVIL ENGINEER: ...
- EXISTING AREA BY THIS PROJECT: 7.075 ACRES
- EXISTING DISTRICT: ...
- EXISTING ZONING: ...
- EXISTING TOTAL SITE AREA: 28.0 ACRES
- EXISTING WATER: ...
- EXISTING SEWER: ...
- EXISTING PARKING SPACES PROVIDED: 104 NEW SPACES
- EXISTING LANDSCAPING REQUIRED: ...
- EXISTING PERIMETER: 120' x 8' SMALL DECIDUOUS TREES, 120' x 8' EVERGREEN TREES, 120' x 8' MEDIUM SHRUBS, 120' x 8' LARGE AND 8' ORNAMENTAL TREES
- EXISTING LANDSCAPING PROVIDED: ...



OVERALL SITE LAYOUT

Midlothian Middle School Recreation Site Improvements

PROJECT 1114

DATE: 12 DECEMBER 2006

SCALE: PROJECT 1114 397'x45'

PROJECT 1114

DATE: 12 DECEMBER 2006

SCALE: PROJECT 1114 397'x45'

PROJECT 1114

DATE: 12 DECEMBER 2006

SCALE: PROJECT 1114 397'x45'

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STAFF'S
REQUEST ANALYSIS
AND
RECOMMENDATION

07PW0406

Chesterfield County Parks and Recreation
(Midlothian Middle School – Recreation Site Improvements)

Midlothian Magisterial District
South line of Midlothian Turnpike

REQUEST: Waiver of Development Standard

Chesterfield County Parks and Recreation requests Planning Commission approval of a Development Standards Waiver to the zoning ordinance requirement that illumination at the property line adjacent to Agricultural (A), Residential-Townhouse (R-TH) and Residential –Multifamily (R-MF) districts be limited to five-tenths (0.5) foot candle per Section 19-508.3 of the Zoning Ordinance.

RECOMMENDATION

Staff recommends approval for the following reasons:

1. The applicant has made a significant effort to reduce the impact of the new lighting to residential property, including the use high quality athletic field light fixtures that provide a very high level of light control.
2. The additional poles and light fixtures are being added to an existing athletic area with a number of older style athletic field light fixtures. Staff believes that the additional illumination will not substantially impact the adjacent residential property.
3. The improvements to the public facilities are consistent with the Midlothian Village Community Plan.

GENERAL INFORMATION

Developer:

Chesterfield County Parks and Recreation

Design Consultant:

Hankins and Anderson

Location:

Located on the south line of Midlothian Turnpike. Tax ID 729-707-6414 (Sheets 5 & 6).

Existing Zoning and Land Use:

Residential (R-7) and Community Business (C-3); Public/semi public, (public middle school)

Size:

28 acres

Adjacent Zoning & Land Use:

North - C-2; Commercial, Public/semi-public (Fire Station) and vacant
South - R-TH and R-MF: Residential
East - C-5 and R-TH; Commercial or vacant
West - A, C-2 and C-3; Single family residential or commercial

BACKGROUND

The applicant is proposing to make improvements to the athletic/recreational fields and parking of the school, part of which includes installing two new athletic field poles and light fixtures to improve lighting for the field closest to the adjacent residential property. The applicant is proposing to use high quality athletic field light fixtures with a high degree of light control that will minimize the impact of additional light to the adjacent residences. Mounting height of the light fixtures will be approximately sixty (60) feet which is approximately the same as for the existing athletic field lighting.

Section 19-508.3 of the Zoning Ordinance requires that illumination at the property line adjacent to Agricultural (A), Residential-Townhouse (R-TH) and Residential –Multifamily (R-MF) districts be limited to five-tenths (0.5) foot candle above background.

The existing athletic field lighting is non-conforming with light levels ranging as high as approximately 8.9 foot candles at the property line.

In order to provide acceptable light distribution onto the playing surface, one of the new poles needs to be located on the side adjacent to the residential property. While the new field lighting will exceed the ordinance requirements due to proximity to the residences, the newer type of sports field lighting is significantly more efficient regarding light control. Based upon the light output diagram that is attached, the highest level of additional light at the property line will be approximately 1.3 to 1.7 foot candles above existing. The 0.5 foot candle level for new lighting extends approximately thirty (30) feet into two of the residential properties. Also provided is a summary sheet that shows the estimated total light output from the existing sports field lighting when the new field lighting is added.

Staff believes that a significant effort has been made to minimize any impact due to the additional light sources. However, should Parks and Recreation have the ability to update the older light fixtures to the new fixtures, the lighting toward the residential property may be further reduced.

CONCLUSIONS

The Zoning Ordinance requires that the Planning Commission make five (5) findings in its determination of development standard waiver requests (see attached). The applicant has submitted justifications for this request.

The applicant is proposing to make improvements to the athletic/recreational fields and parking of the school, part of which includes installing two new light poles and light fixtures to improve lighting for the field closest to the adjacent residential property. Staff recommends approval of the development standards waiver for the reasons noted.

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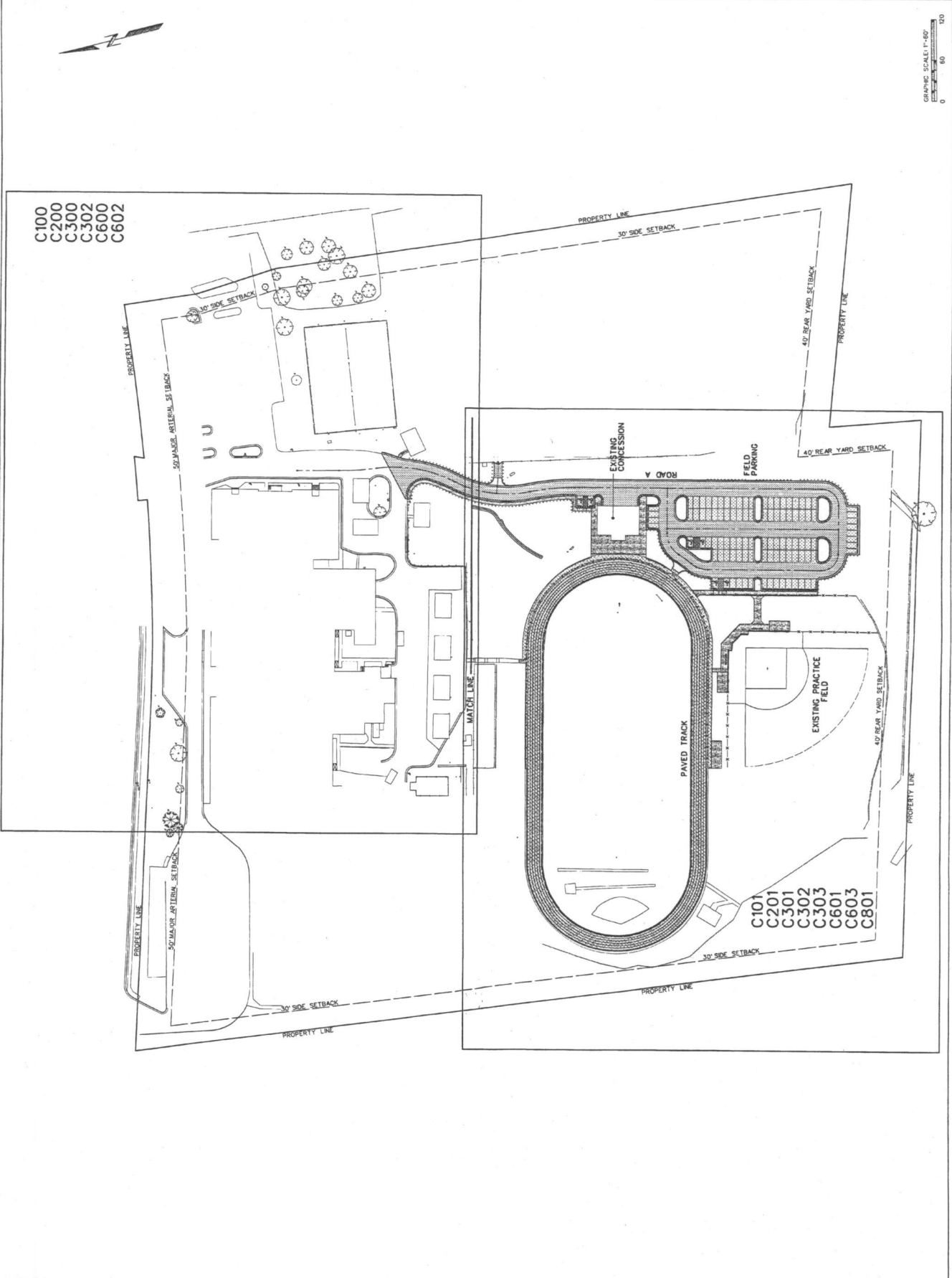


07PW0406
MIDLOTHIAN MS
RECREATION SITE
IMPROVEMENTS

800 0 800 Feet

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GUARANTEED PERFORMANCE

ILLUMINATION SUMMARY

Blanket Grid

Chesterfield Midlothian MS Multipurpose
Midlothian, VA

Blanket Grid

- Grid Spacing = 30.0' x 30.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5000 hours
- Avg Lumens/Lamp: 134,000

CONSTANT ILLUMINATION

HORIZONTAL FOOTCANDLES

Entire Grid
No. of Target Points: 256
Average: 3.9
Maximum: 29
Minimum: 0

Average Lamp Tilt Factor: 1.000
Number of Luminaires: 8
Avg KW over 5000 hours: 12.51
Max KW: 13.6

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

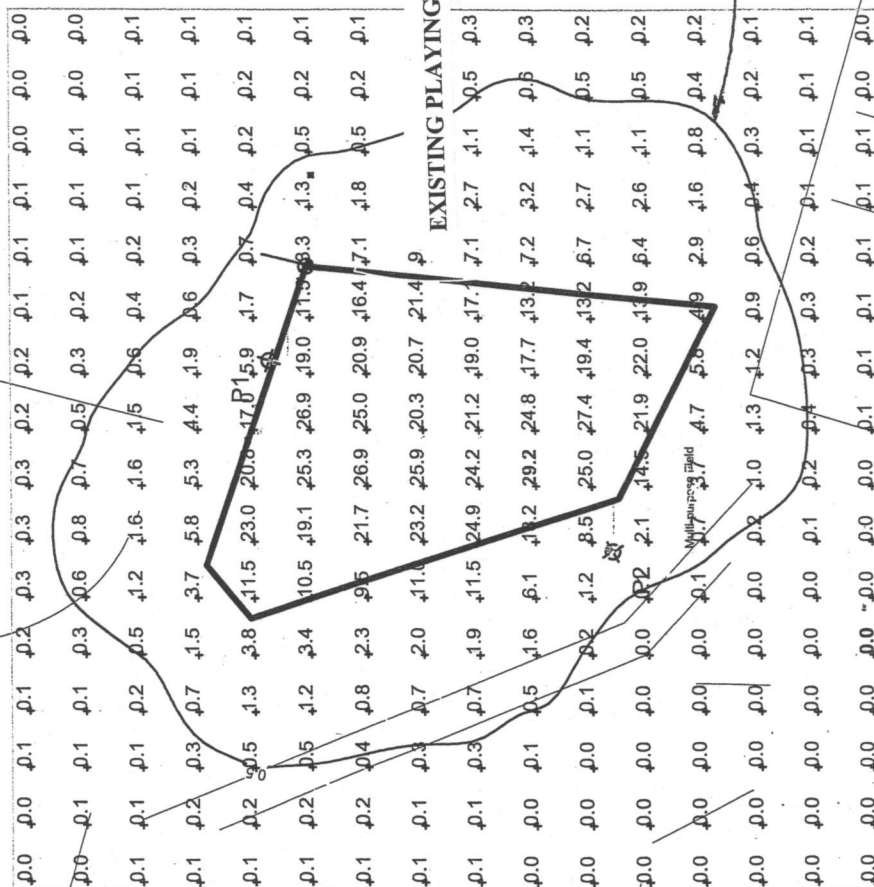
Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Requirements: Refer to Amperage the "Musco Control System Summary"

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN							
Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	MOUNTING HEIGHT	LAMP TYPE	QTY/POLE	THIS GRID OTHER GRIDS
1	P1	60'	-	60'	1500W MZ	3	0
1	P2	60'	-	60'	1500W MZ	5	0
TOTALS						8	0

EXISTING TRACK & FIELD



EXISTING PLAYING FIELD

LINE OF 0.5 fc ILLUMINATION FROM NEW FIELD LIGHTS

- RESIDENTIAL PROPERTY

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GUARANTEED PERFORMANCE
60' LIGHT POLE (PROPOSED)

ILLUMINATION SUMMARY

Property Spill

Chesterfield Midlothian MS Multipurpose
Midlothian, VA

Property Spill

- Grid Spacing = 30.0'
- Values given at 3.0' above grade

- Luminaire Type: Green Generation
- Rated Lamp Life: 5000 hours
- Avg Lumens/Lamp: 134,000

**CONSTANT ILLUMINATION
HORIZONTAL FOOTCANDLES**

No. of Target Points: 19
Average: 0.206
Maximum: 1.74
Minimum: 0.01

Average Lamp Tilt Factor: 1.000
Number of Luminaires: 8
Avg KW over 5000 hours: 12.51
Max KW for Sizing Transformer: 13.6

Guaranteed Performance: The CONSTANT ILLUMINATION described above is guaranteed for the rated life of the lamp.

Field Measurements: Averages shall be +/-10% in accordance with IESNA RP-6-01 and CIBSE LG4. Individual measurements may vary from computer predictions.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume +/- 3% nominal voltage at line side of the ballast and structures located within 3 feet (1m) of design locations.

By: Jason Sandifer
File #: 125373-3
Date: 05-Feb-07

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EXISTING TRACK & FIELD

PROPOSED LIGHT POLE & FIELD LIGHTS

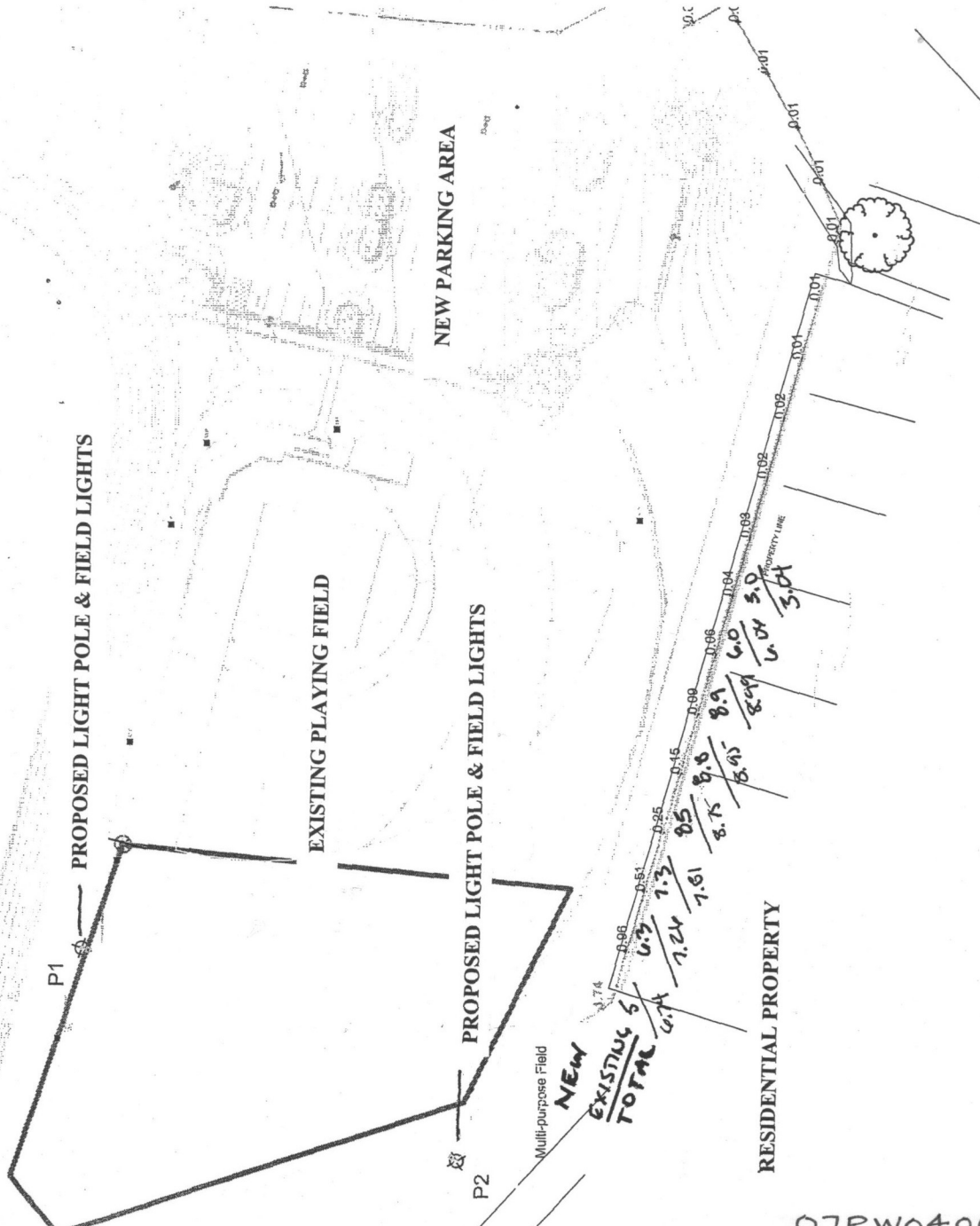
EXISTING PLAYING FIELD

NEW PARKING AREA

PROPOSED LIGHT POLE & FIELD LIGHTS

RESIDENTIAL PROPERTY

EQUIPMENT LIST FOR AREAS SHOWN				
Pole		Luminaires		
QTY	LOCATION	SIZE	GRAB ELEVATION	QTY/ POLE
1	P1	60'	60'	1500W MZ
1	P2	60'	60'	1500W MZ
2	TOTALS			8



SCALE IN FEET 1:80



07PW0406-3

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